SER. NO: 09/893,065
INVENTOR: WALTER V. DIXON, ET AL
DOCKET NO: RD-27,478
ATTORNEY: DAVID C. GOLDMAN
ATTY. TELEPHONE: (518) 387-5927

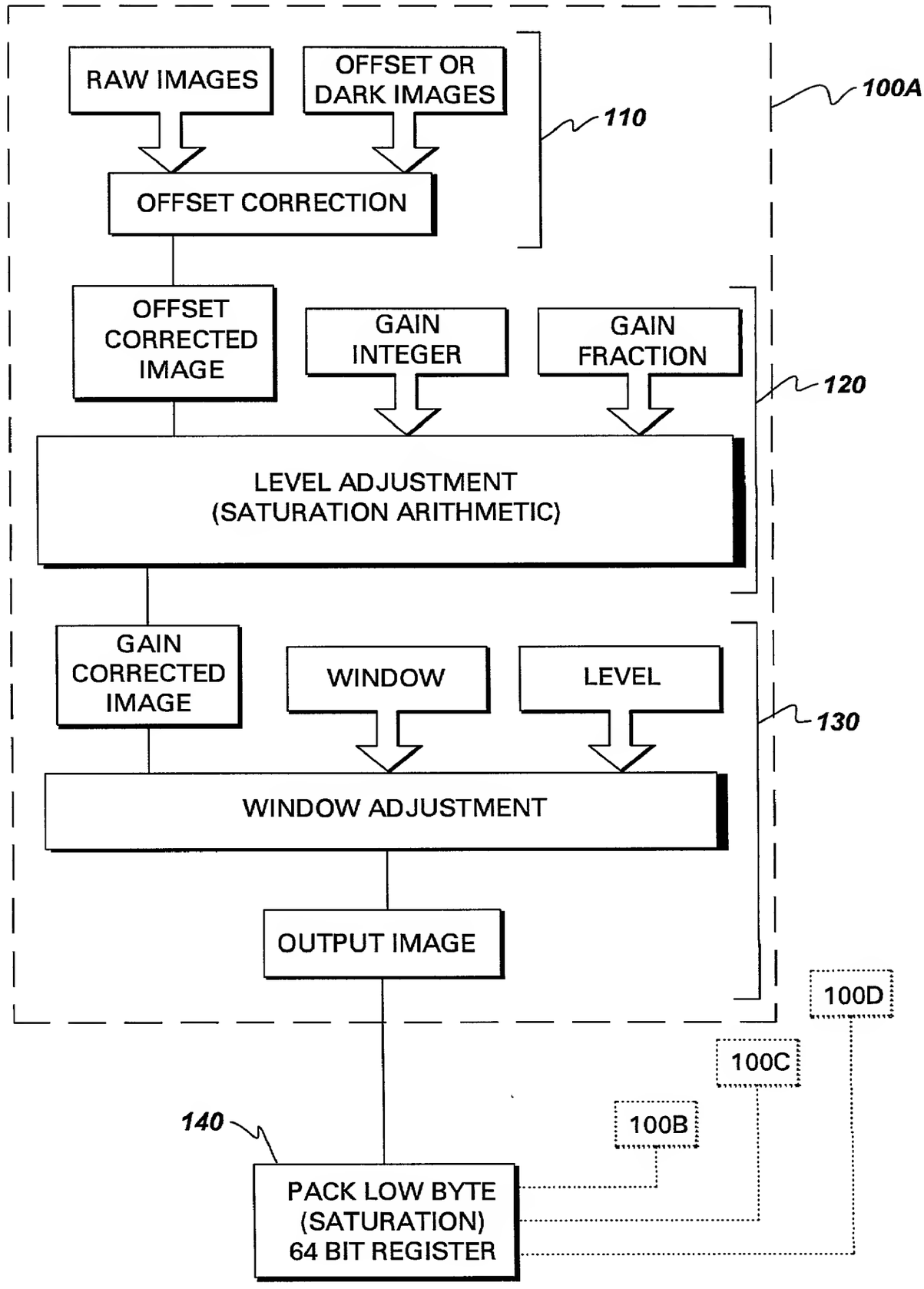


Fig. 1

Express Mail Label No. EV 339056950

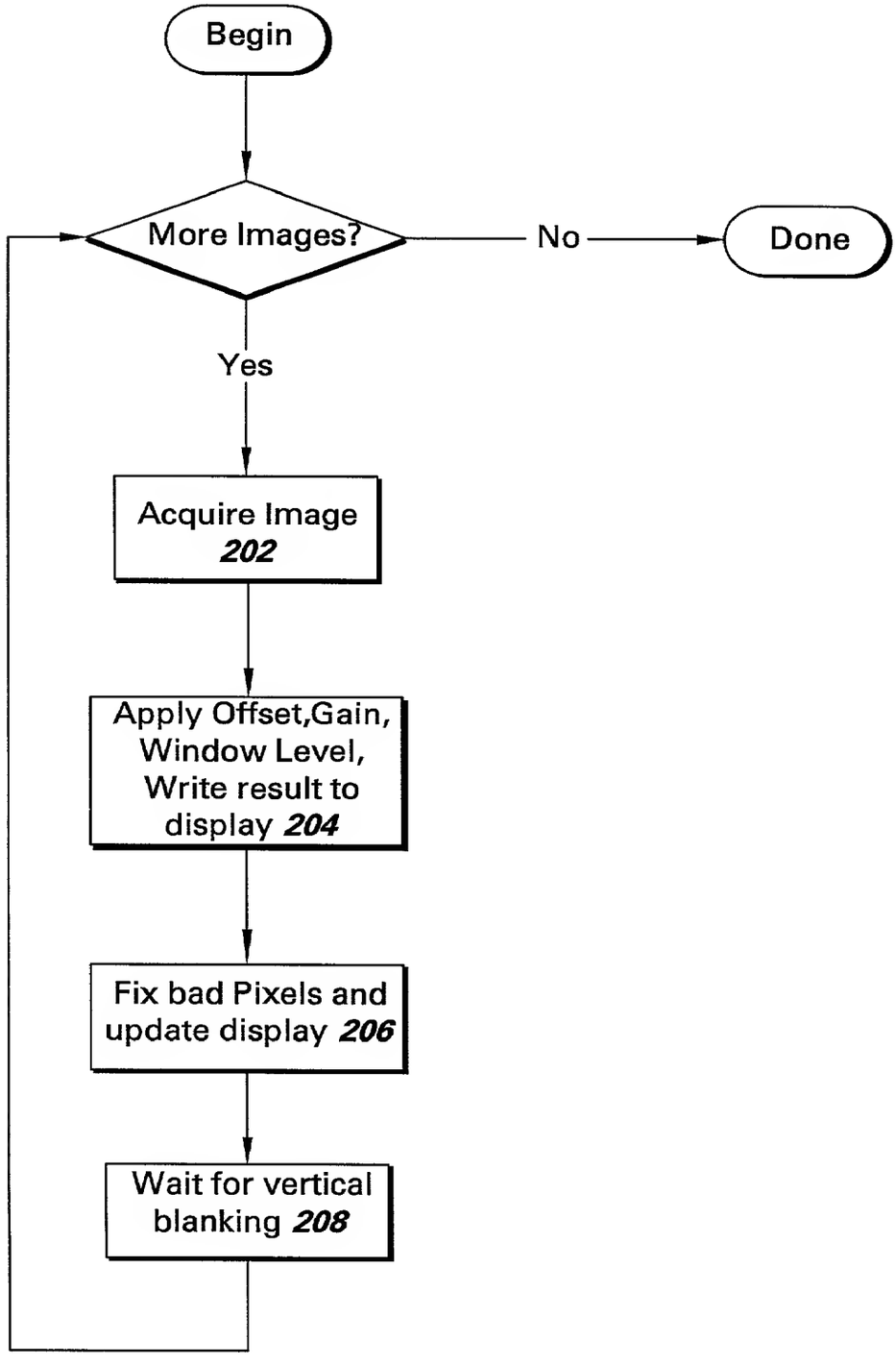
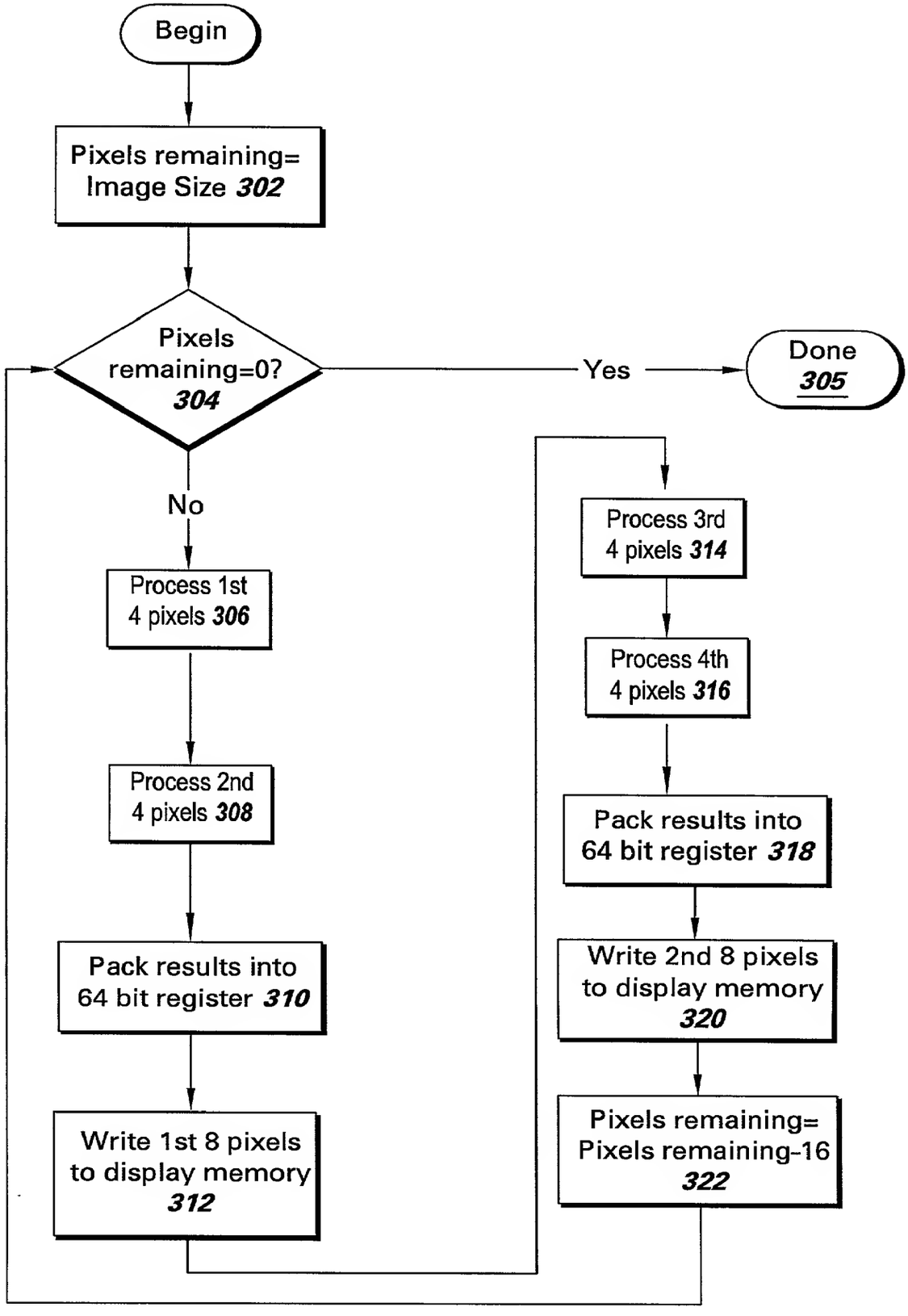

Begin
More Images?
No
Done
Yes
Acquire Image 202
Apply Offset,Gain, Window Level, Write result to display 204
Fix bad Pixels and update display 206
Wait for vertical blanking 208

Fig. 2

Fig. 3


Begin
Pixels remaining= Image Size 302
Pixels remaining=0? 304
Yes
Done 305
No
Process 1st 4 pixels 306
Process 2nd 4 pixels 308
Pack results into 64 bit register 310
Write 1st 8 pixels to display memory 312
Process 3rd 4 pixels 314
Process 4th 4 pixels 316
Pack results into 64 bit register 318
Write 2nd 8 pixels to display memory 320
Pixels remaining= Pixels remaining-16 322

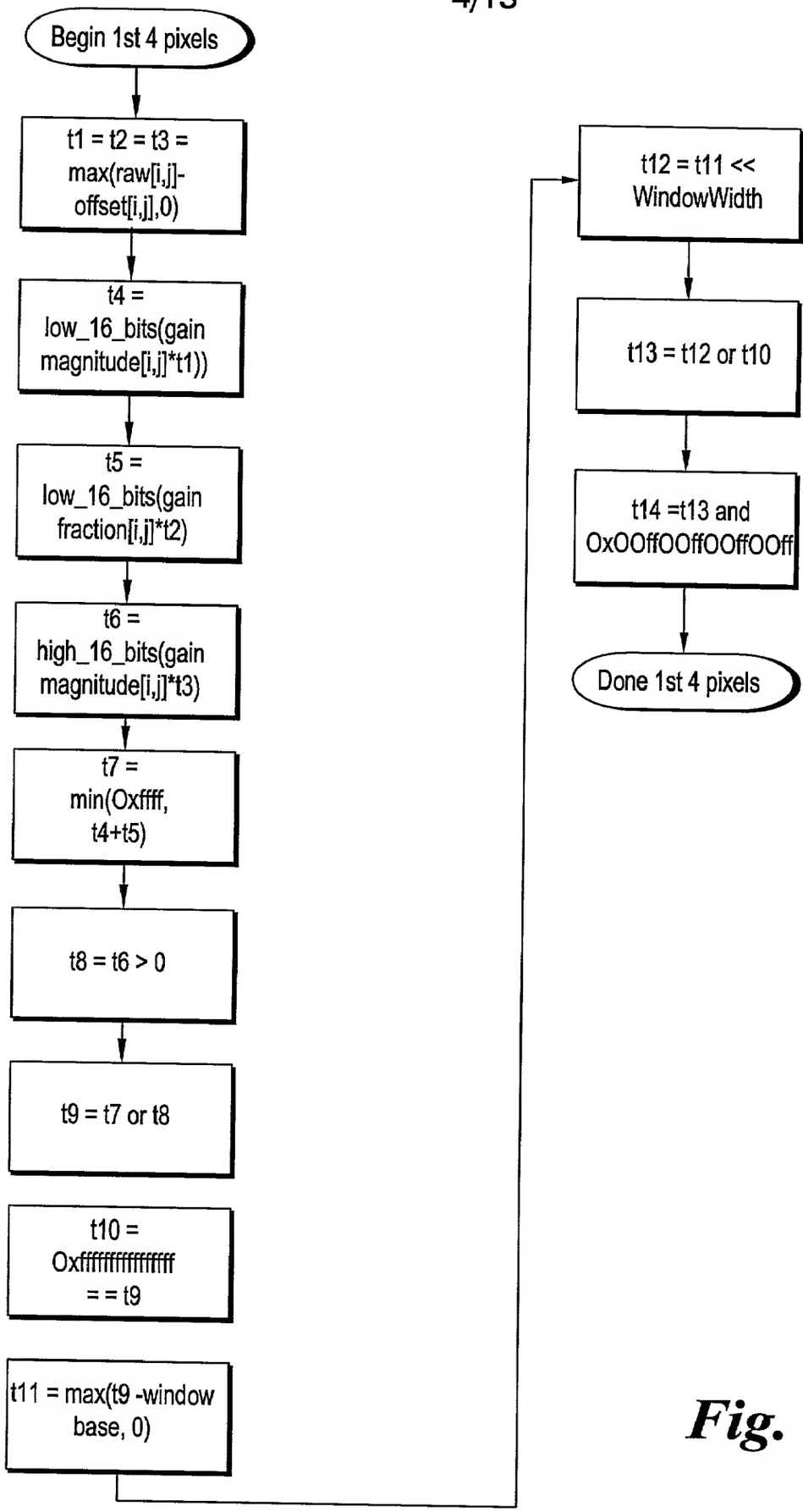

Begin 1st 4 pixels
t1 = t2 = t3 = max(raw[i,j]-offset[i,j],0)
t4 = low_16_bits(gain magnitude[i,j]*t1))
t5 = low_16_bits(gain fraction[i,j]*t2)
t6 = high_16_bits(gain magnitude[i,j]*t3)
t7 = min(Oxffff, t4+t5)
t8 = t6 > 0
t9 = t7 or t8
t10 = Oxffffffffffffffff = = t9
t11 = max(t9 -window base, 0)
t12 = t11 << WindowWidth
t13 = t12 or t10
t14 =t13 and OxOOffOOffOOffOOff
Done 1st 4 pixels

Fig. 4

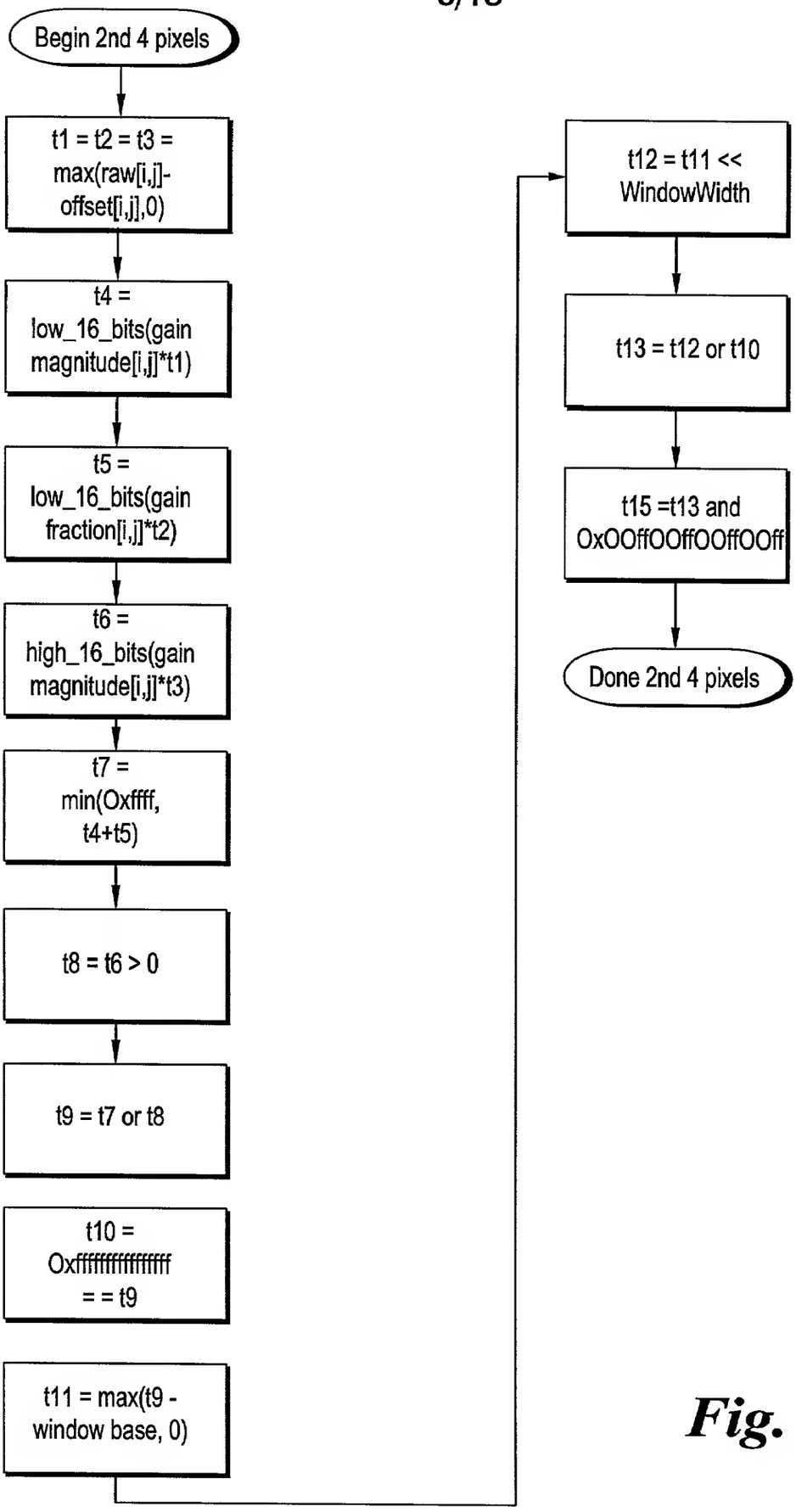

Begin 2nd 4 pixels
t1 = t2 = t3 = max(raw[i,j]-offset[i,j],0)
t4 = low_16_bits(gain magnitude[i,j]*t1)
t5 = low_16_bits(gain fraction[i,j]*t2)
t6 = high_16_bits(gain magnitude[i,j]*t3)
t7 = min(Oxffff, t4+t5)
t8 = t6 > 0
t9 = t7 or t8
t10 = Oxffffffffffffffff = = t9
t11 = max(t9 - window base, 0)
t12 = t11 << WindowWidth
t13 = t12 or t10
t15 =t13 and OxOOffOOffOOffOOff
Done 2nd 4 pixels

Fig. 5

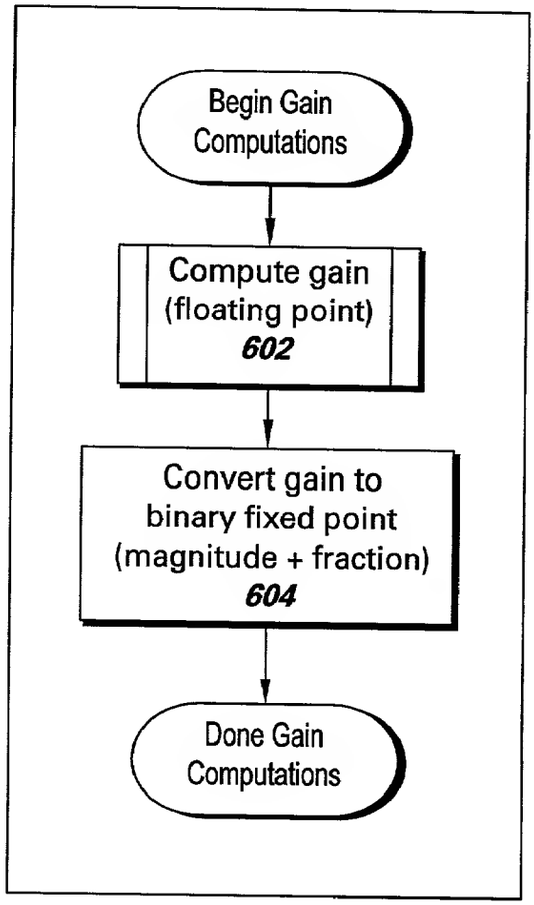


Fig. 6

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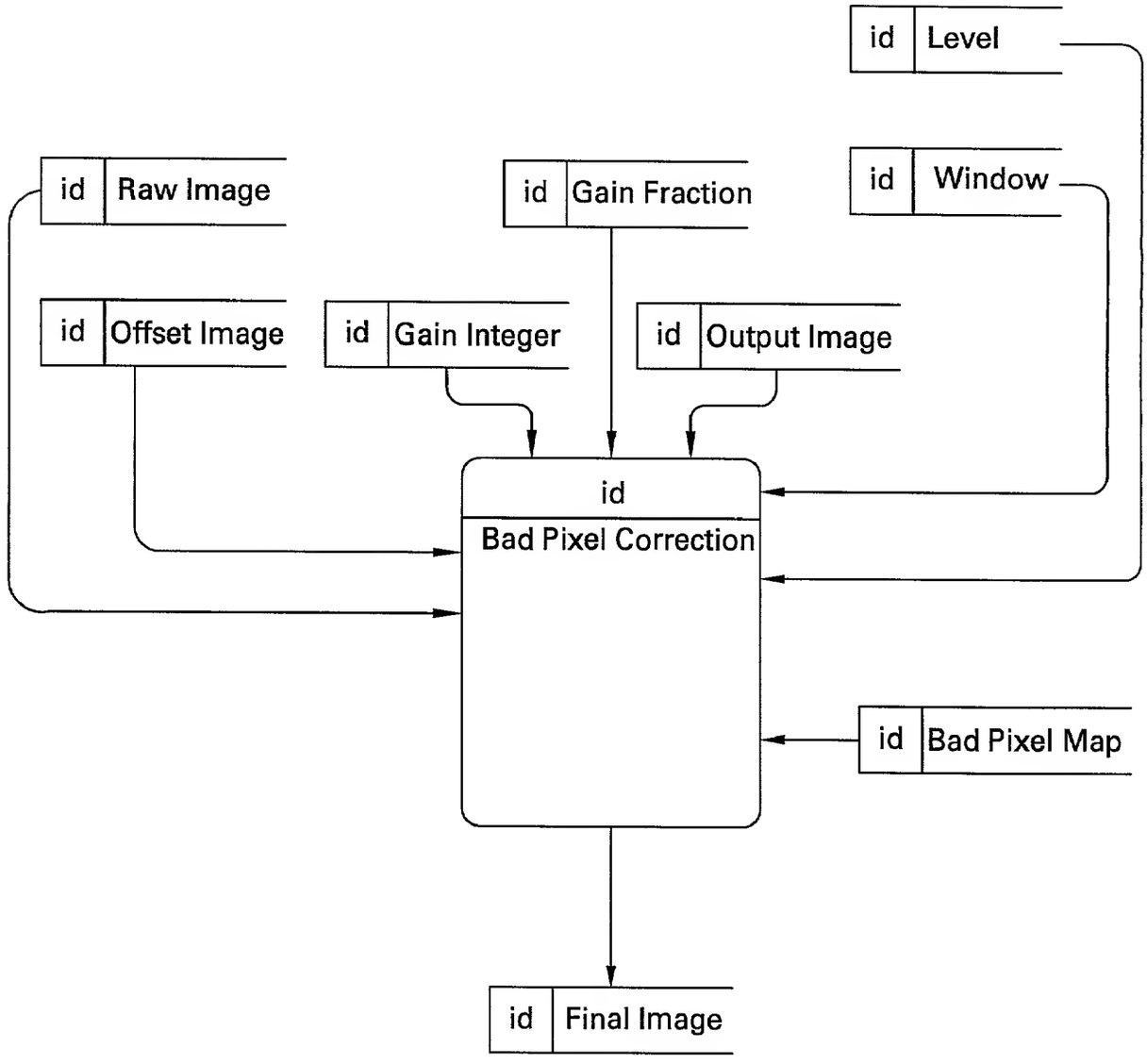
id Level
id Raw Image
id Gain Fraction
id Window
id Offset Image
id Gain Integer
id Output Image
id
Bad Pixel Correction
id Bad Pixel Map
id Final Image

Fig. 7

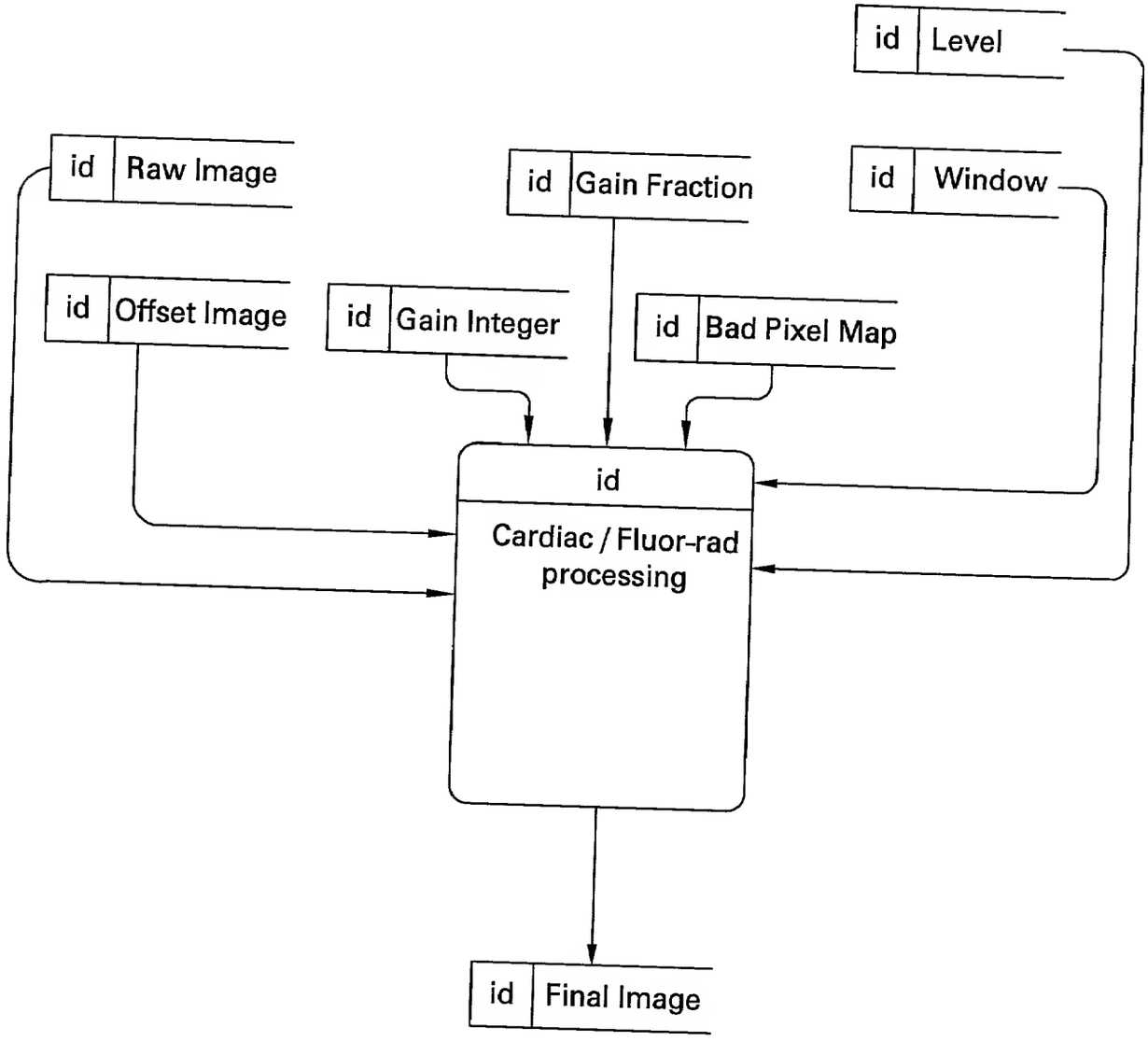
id Level
id Raw Image
id Gain Fraction
id Window
id Offset Image
id Gain Integer
id Bad Pixel Map
id
Cardiac / Fluor-rad processing
id Final Image

Fig. 8

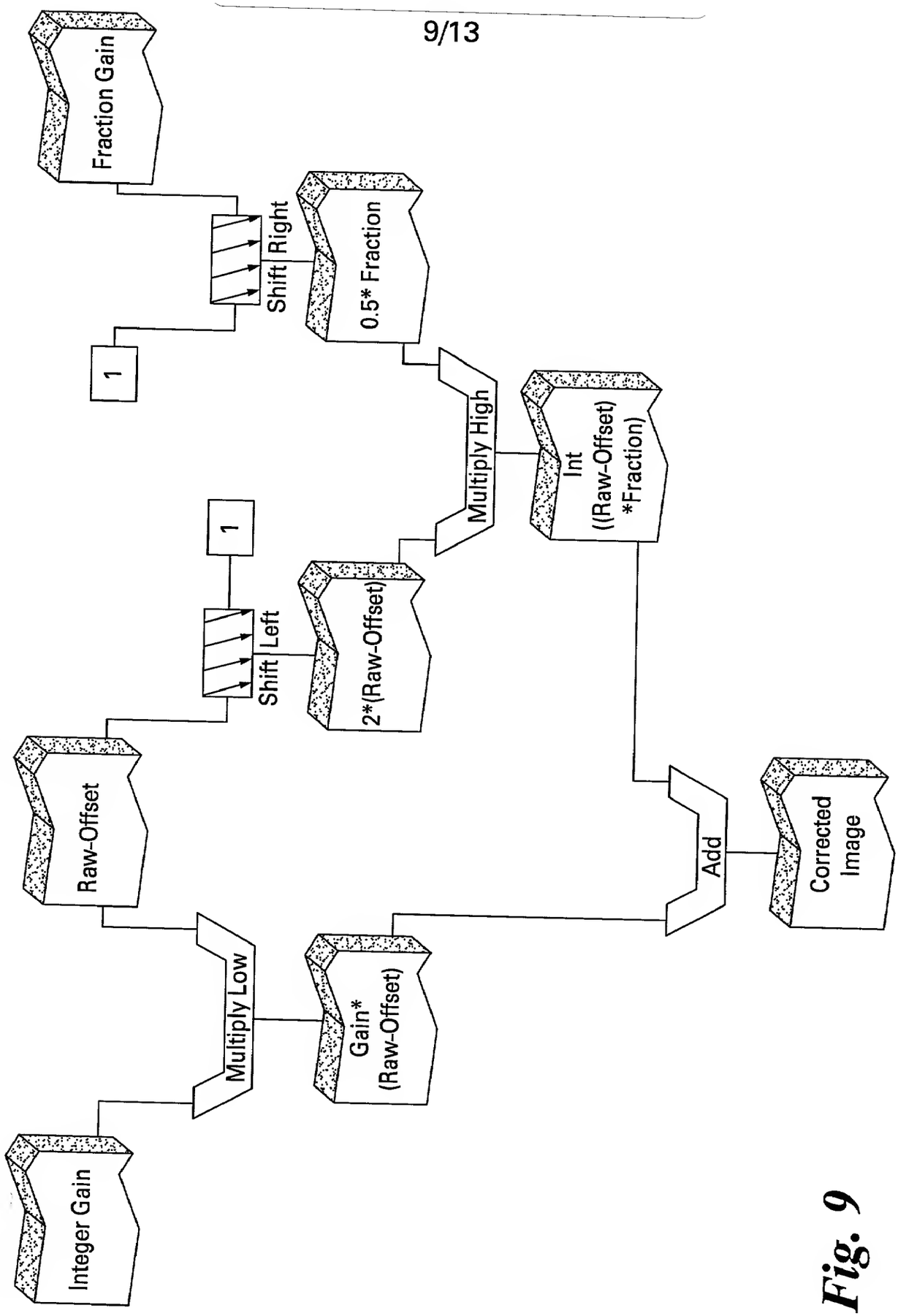
Fraction Gain
Shift Right
1
0.5* Fraction
Multiply High
Int ((Raw-Offset) *Fraction)
1
Shift Left
2*(Raw-Offset)
Raw-Offset
Add
Corrected Image
Multiply Low
Gain* (Raw-Offset)
Integer Gain

Fig. 9

T06T60"5903560

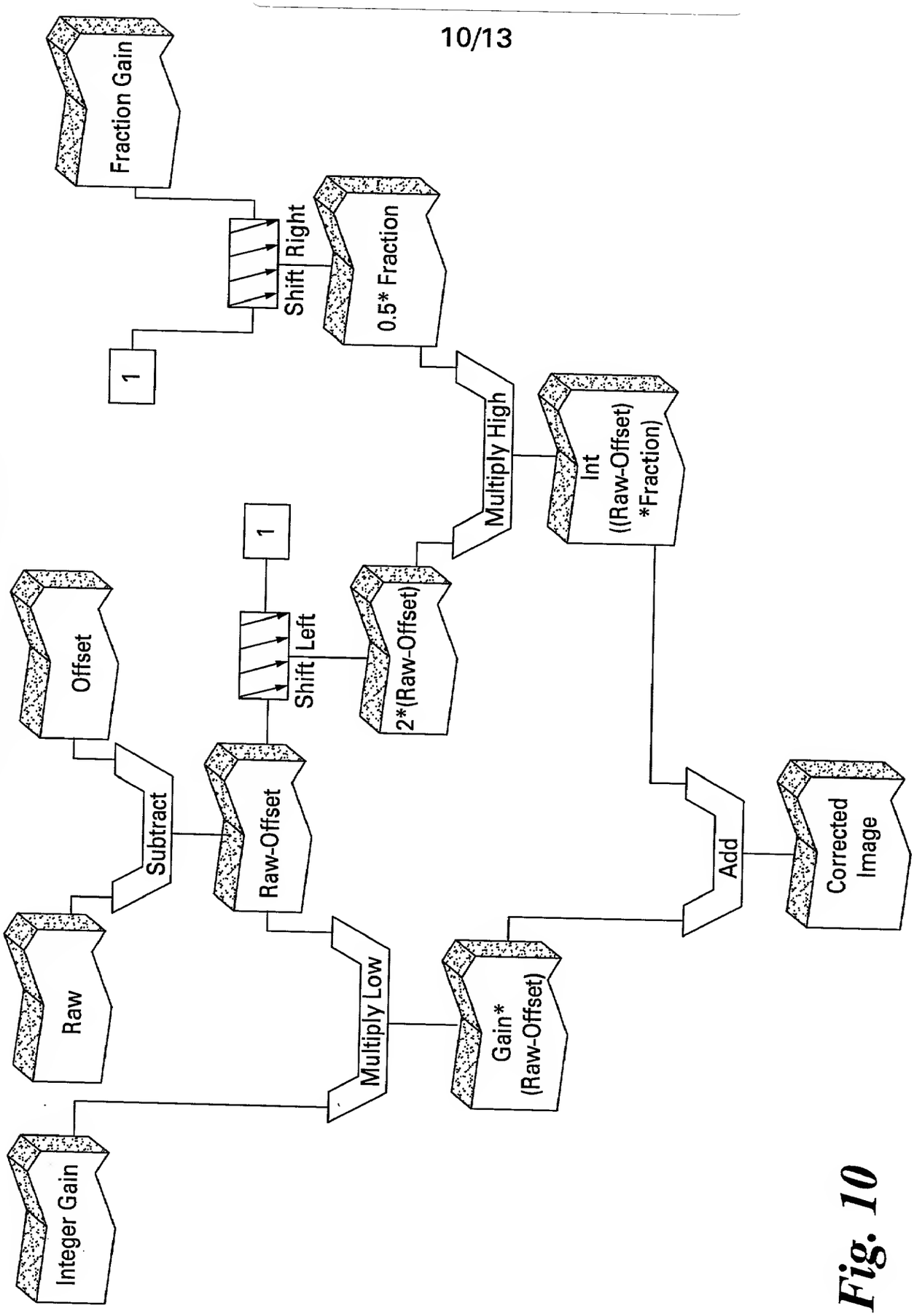

Fig. 10

T06T60"590E6860

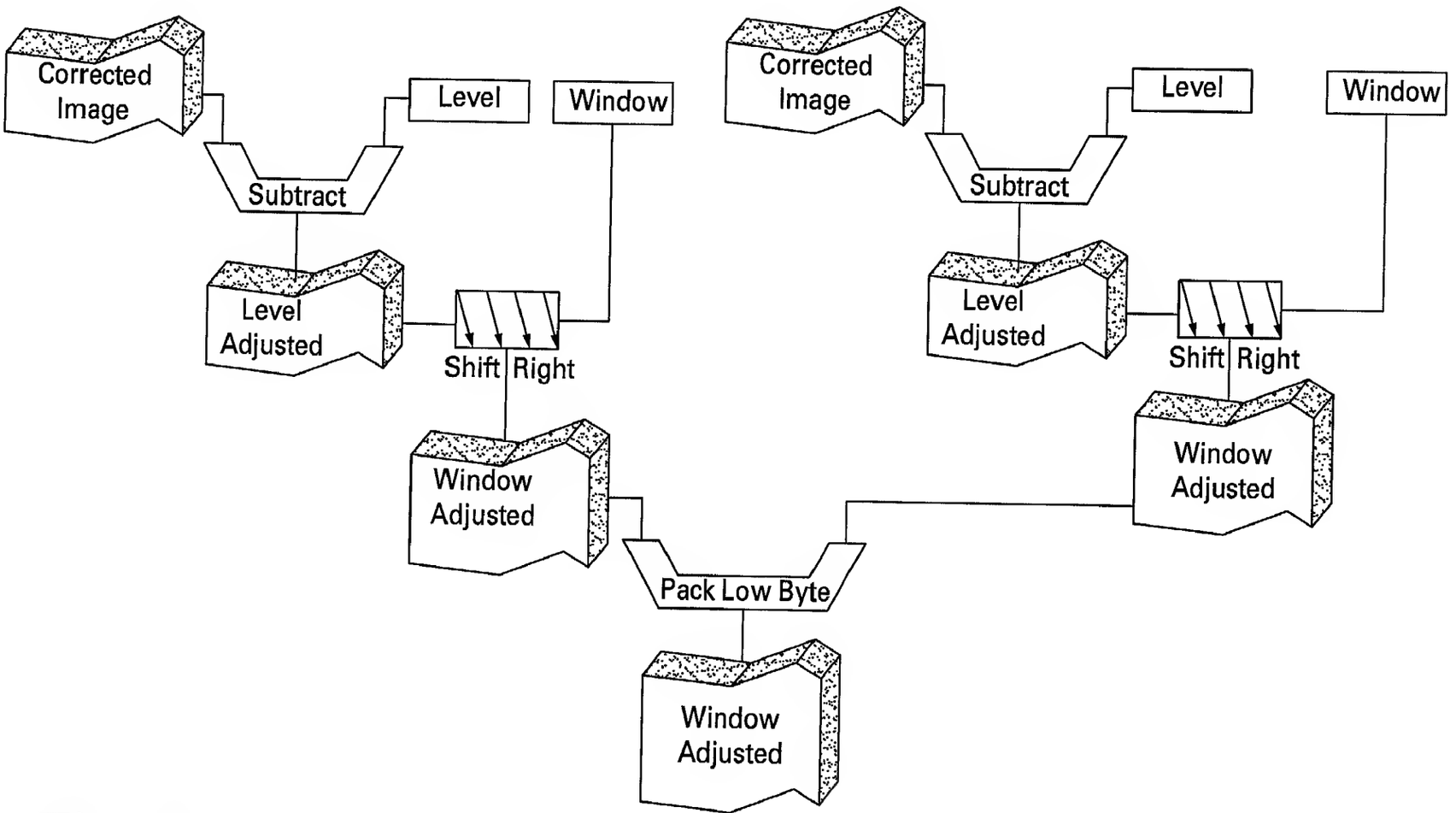

Fig. 11

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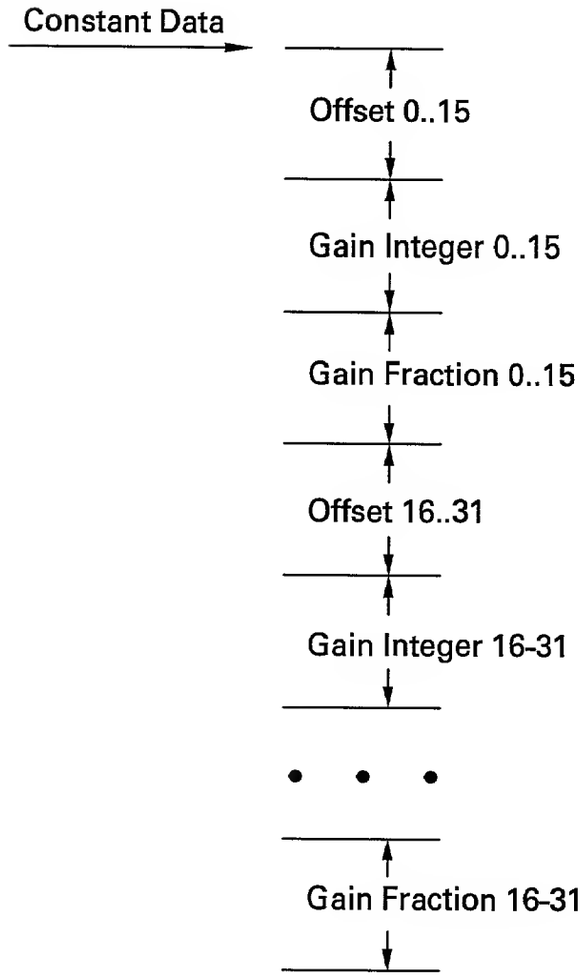

Fig. 12

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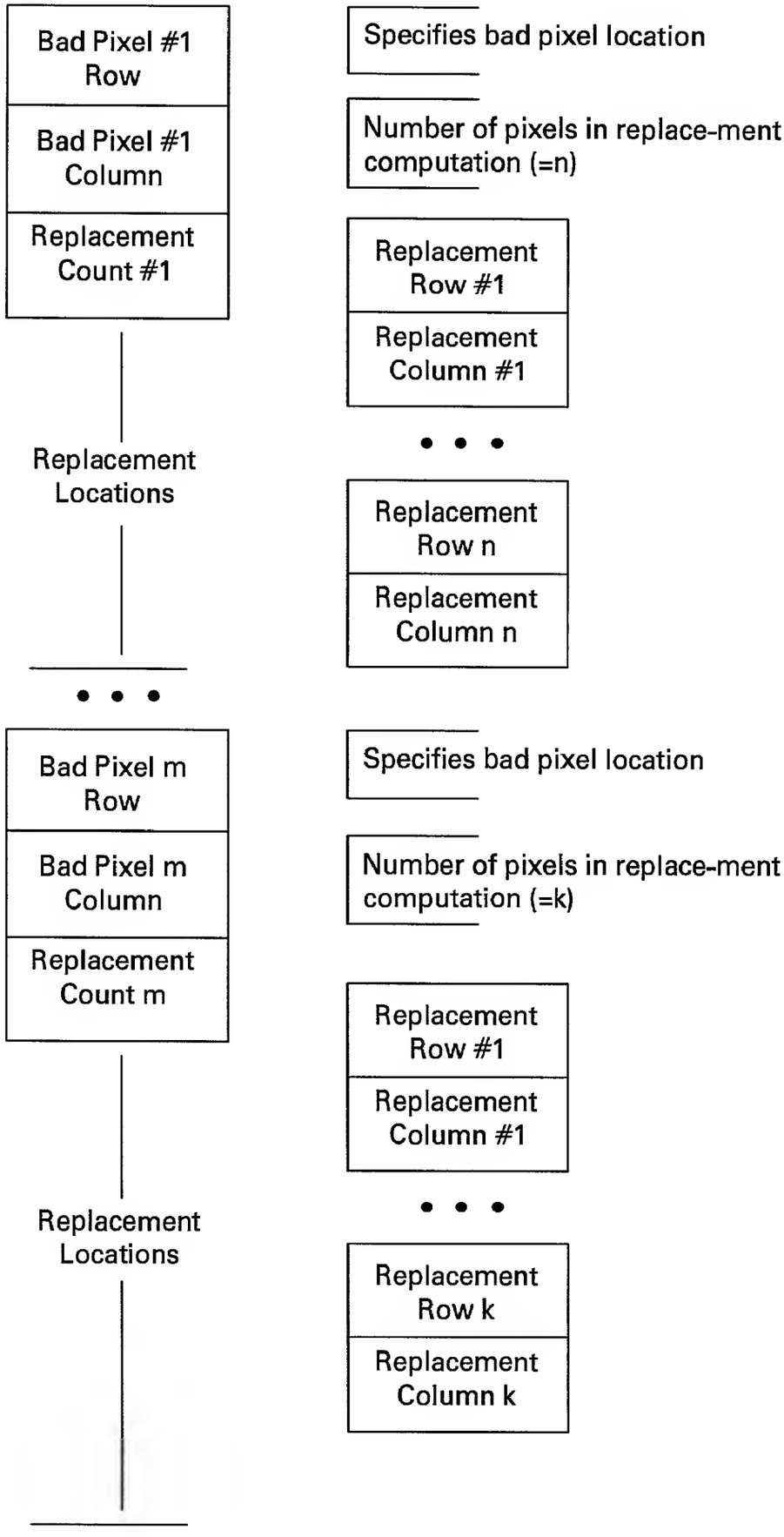
Fig. 13


Bad Pixel #1 Row
Bad Pixel #1 Column
Replacement Count #1
Specifies bad pixel location
Number of pixels in replace-ment computation (=n)
Replacement Row #1
Replacement Column #1
Replacement Locations
Replacement Row n
Replacement Column n
Bad Pixel m Row
Bad Pixel m Column
Replacement Count m
Specifies bad pixel location
Number of pixels in replace-ment computation (=k)
Replacement Row #1
Replacement Column #1
Replacement Locations
Replacement Row k
Replacement Column k